

## Facade Insulation Fixings



# KC Insulation washer

Insulation washer with integral cap suitable for attachment of insulation layers to wooden and sheet metal substrates.



## Product information

### Features and benefits

- Recommended for the attachment of ETICS to wooden substrates using UC screws, or to sheet metal using WB screws.
- Special design of integral fastener cap allows reduction of thermal bridges.
- Consistent and reliable holding force
- Quick, simple and clean installation.
- Can be used in combination with additional KWL plate - 90, 110 or 140mm diameter.

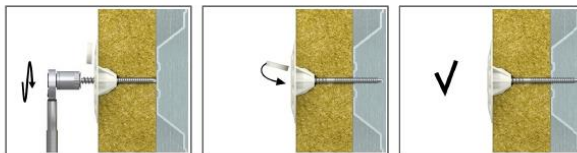
### Applications

- External Thermal Insulation Composite Systems (ETICS)
- Polystyrene (EPS) boards
- Mineral wool (MW) boards
- Polyurethane (PU) boards

### Base materials

- Approved for use in:**
- Metal Sheet & Profiles
  - Wood

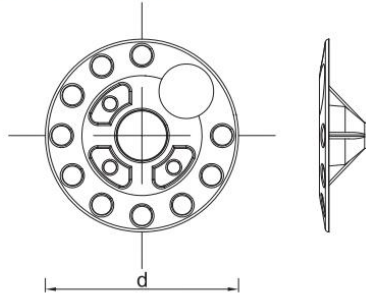
## Installation guide



1. Lightly insert KC washer into surface of insulation material.
2. Drive the required screw through the washer and insulation material into the substrate, until fixing depth is reached.
3. In wooden substrates the washer is recommended for use with the UC chipboard screw.
4. In sheet metal the washer is recommended for use with either the WB or WX self-drilling screw.

**Facade Insulation Fixings** **RAWLPLUG®**

**Product information**



Size	Product Code	Fixing			Fixture
		Screw diameter	Length	Plate diameter	Max. thickness
		d	L	D	t <sub>fix</sub>
[mm]					
KC with screw to wood					
Ø5	KC + UC-5050	5	50	60	30
	KC + UC-5060	5	60	60	40
	KC + UC-5070	5	70	60	50
	KC + UC-5080	5	80	60	60
	KC + UC-5090	5	90	60	70
	KC + UC-50100	5	100	60	80
Ø6	KC + UC-60100	6	100	60	75
	KC + UC-60120	6	120	60	95
	KC + UC-60140	6	140	60	115
	KC + UC-60160	6	160	60	135
	KC + UC-60200	6	200	60	175
KC with selfdrilling screw to steel sheet					
Ø5	KC + WB-48100	4.8	100	60	90
	KC + WB-48120	4.8	120	60	110
	KC + WB-48140	4.8	140	60	130
	KC + WB-48160	4.8	160	60	150
	KC + WB-48170	4.8	170	60	160
	KC + WB-48180	4.8	180	60	170
	KC + WB-48200	4.8	200	60	190
	KC + WB-48220	4.8	220	60	210

**Installation data**

Substrate	Timber			Steel	
	h <sub>sub</sub>	[mm]			
Min. installation depth	h <sub>sub</sub>	[mm]	20	25	0.75
Min. substrate thickness	h <sub>sub</sub>	[mm]	20	25	0.75
Min. spacing	s <sub>sub</sub>	[mm]	100	100	100
Min. edge distance	c <sub>sub</sub>	[mm]	100	100	100
Fixing diameter	d	[mm]	5	6	4.8

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### Basic performance data

Performance data for single anchor without influence of edge distance and spacing

Substrate		Timber	Timber	Steel
Effective embedment depth $h_{ef}$	[mm]	20	25	0.75
<b>MEAN ULTIMATE LOAD <math>N_{Rk,m}</math></b>				
KC + UC Ø5	[kN]	0.78	-	-
KC + UC Ø6	[kN]	-	0.98	-
KC + WB	[kN]	-	-	0.86
<b>CHARACTERISTIC LOAD <math>N_{Rk}</math></b>				
KC + UC Ø5	[kN]	0.73	-	-
KC + UC Ø6	[kN]	-	0.91	-
KC + WB	[kN]	-	-	0.81
<b>DESIGN LOAD <math>N_{Ed}</math></b>				
KC + UC Ø5	[kN]	0.36	-	-
KC + UC Ø6	[kN]	-	0.45	-
KC + WB	[kN]	-	-	0.40
<b>RECOMMENDED LOAD <math>N_{rec}</math></b>				
KC + UC Ø5	[kN]	0.26	-	-
KC + UC Ø6	[kN]	-	0.32	-
KC + WB	[kN]	-	-	0.29
<b>Fixing type</b>		KC		
Plate stiffness	[kN/mm]	0.4		

### Product commercial data

Size	Product Code	Fixing			Screw Length [mm]	Quantity [pcs]			Weight [kg]			Bar Codes
		Screw diameter [mm]	Length [mm]	Plate diameter [mm]		Box	Outer	Pallet	Box	Outer	Pallet	
Ø5	KC + UC-5050	5	50	60								
	KC + UC-5060	5	60	60								
	KC + UC-5070	5	70	60								
	KC + UC-5080	5	80	60								
	KC + UC-5090	5	90	60								
	KC + UC-50100	5	100	60								
Ø6	KC + UC-60100	6	100	60								
	KC + UC-60120	6	120	60								
	KC + UC-60140	6	140	60								
	KC + UC-60200	6	200	60								
Ø5	KC + WB-48100	4.8	100	60								
	KC + WB-48120	4.8	120	60								
	KC + WB-48140	4.8	140	60								
	KC + WB-48160	4.8	160	60								
	KC + WB-48170	4.8	170	60								
	KC + WB-48180	4.8	180	60								
	KC + WB-48200	4.8	200	60								
KC + WB-48220	4.8	220	60									
Ø4.8	R-WX-48050				50	250	3000	72000	1.10	13.2	346.8	5906675175140
	R-WX-48060				60	250	3000	72000	1.39	16.7	430.3	5906675175164
	R-WX-48070				70	250	3000	72000	1.61	19.3	493.7	5906675175188
	R-WX-48080				80	250	3000	72000	1.89	22.7	574.3	5906675175201
	R-WX-48100				100	200	2400	57600	1.85	22.2	562.8	5906675175225
	R-WX-48120				120	200	2400	57600	2.2	26.5	666.5	5906675175249
	R-WX-48140				140	200	2400	57600	2.6	30.8	770.2	5906675175263

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		Screw diameter [mm]	Length [mm]	Plate diameter [mm]		Box	Outer	Pallet	Box	Outer	Pallet	
Ø4.8	R-WX-48160				160	100	1200	28800	1.50	17.9	460.6	5906675175287
	R-WX-48180				180	100	100	16800	1.67	1.67	310.6	5906675175300
	R-WX-48200				200	100	100	16800	1.85	1.85	340.8	5906675175324
	R-WX-48240				240							
	R-WX-48300				300	100	100	16800	2.8	2.8	491.2	5906675175348
	R-WX-48T050				50	250	3000	72000	1.17	14.1	367.8	5906675104157
	R-WX-48T060				60	250	3000	72000	1.39	16.6	429.5	5906675104164
	R-WX-48T070				70	250	3000	72000	1.61	19.3	492.2	5906675104171
	R-WX-48T080				80	250	3000	72000	1.86	22.3	564.8	5906675104188
	R-WX-48T100				100	200	2400	57600	1.86	22.4	566.8	5906675104201
	R-WX-48T120				120	200	2400	57600	2.2	26.9	675.4	5906675104232
	R-WX-48T140				140	200	2400	57600	2.6	31.3	780.2	5906675104256
	R-WX-48T160				160	100	1200	28800	1.51	18.1	463.7	5906675104263
	R-WX-48T180				180	100	100	16800	1.75	1.75	324.7	5906675104270
	R-WX-48T200				200	100	100	16800	1.93	1.93	353.6	5906675104287
	R-WX-48T240				240	100	100	16800	2.3	2.3	408.8	5906675104300
	R-WX-48T300				300	100	100	16800	2.8	2.8	498.0	5906675104317
	R-WO-48T060				60	250	3000	72000	1.38	16.6	428.6	5906675104676
	R-WO-48T080				80	250	3000	72000	1.81	21.7	551.6	5906675104683
	R-WO-48T100				100	200	3200	76800	1.85	29.6	741.2	5906675104690
	R-WO-48T120				120	200	3200	76800	2.1	33.9	842.9	5906675104706
	R-WO-48T140				140	200	2400	57600	2.5	30.4	760.4	5906675104713
	R-WO-48T160				160	100	1200	28800	1.59	19.1	488.2	5906675104720
	R-WO-48T180				180	100	100	16800	1.83	1.83	337.8	5906675104744
R-WO-48T200				200	100	100	16800	2.0	2.0	371.5	5906675104751	
R-WO-48T240				240	100	100	16800	2.2	2.2	399.9	5906675104768	
R-WO-48T300				300	100	100	16800	2.7	2.7	485.8	5906675104775	
Ø6.1	R-WBT-61050				50	100	3200	76800	0.79	25.2	634.4	5906675101200
	R-WBT-61075				75	100	1600	38400	1.11	17.7	454.3	5906675101231
	R-WBT-61090				90	100	1600	38400	1.34	21.4	543.8	5906675101309
	R-WBT-61100				100	100	1600	38400	1.49	23.9	602.5	5906675101408
	R-WBT-61120				120	100	1200	28800	1.77	21.3	540.9	5906675101439
	R-WBT-61140				140	100	1200	28800	2.0	24.5	618.7	5906675101460
	R-WBT-61160				160	100	1200	28800	2.3	28.1	704.2	5906675101514
	R-WBT-61180				180	100	100	16800	2.7	2.7	477.9	5906675225173
	R-WBT-61200				200	100	100	16800	2.9	2.9	518.5	5906675101927
	R-WBT-61220				220	100	100	16800	3.2	3.2	568.4	5906675102214
	R-WBT-61240				240	100	100	16800	3.5	3.5	620.7	5906675102245
	R-WBT-61260				260	100	100	16800	3.8	3.8	661.7	5906675102269
R-WBT-61300				300	100	100	7800	4.3	4.3	367.0	5906675102290	